PB84-108687

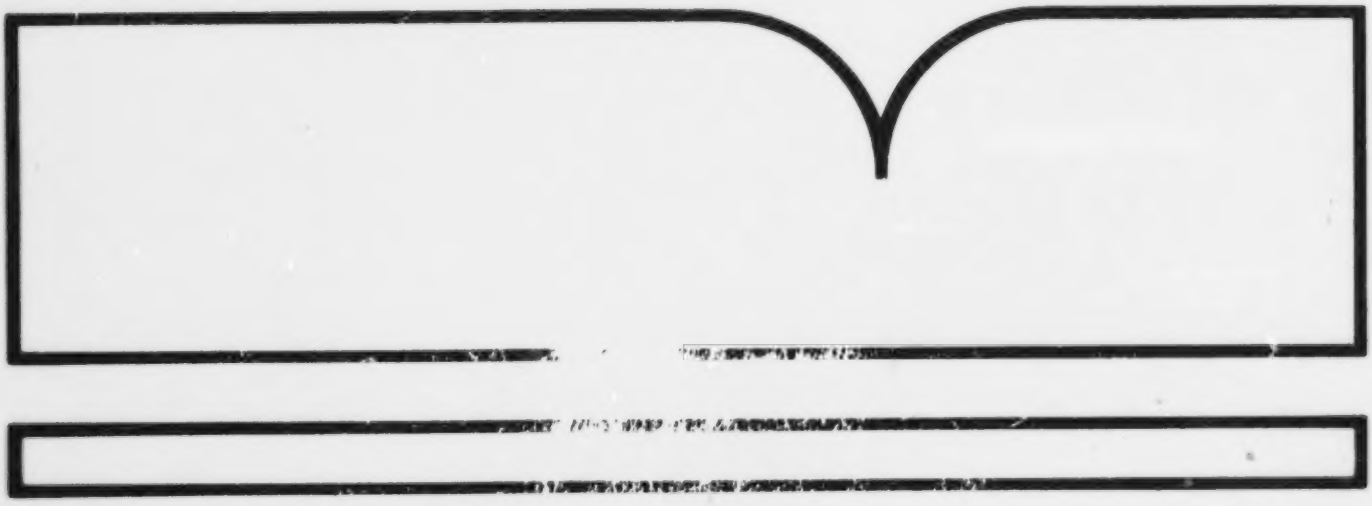
Household Hazardous Waste Disposal Project. Metro Toxicant Program Report Number 1E. Directory for Household Hazardous Waste Disposal in Seattle-King County

Municipality of Metropolitan Seattle-METRO, WA

Prepared for

Environmental Protection Agency, Seattle, WA

Aug 82



U.S. Department of Commerce
National Technical Information Service
NTIS

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. MMS/WQR - 8215	2.	3. Recipient's Accession No. PB84 108687

4. Title and Subtitle

DIRECTORY FOR HOUSEHOLD HAZARDOUS WASTE DISPOSAL IN SEATTLE-KING COUNTY

Household Hazardous Waste Disposal Project, Metro Toxicant Program, Report 1E

5. Report Date: Date of Issue: August, 1982

6.

7. Author(s)

Susan Ridgley and Judy Fey

8. Performing Organization Rept. No.

9. Performing Organization Name and Address

Municipality of Metropolitan Seattle (METRO)
Water Quality Division, Toxicant Control Planning Section
821 Second Avenue, Seattle, WA 98104

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.

(C)

(G) #P-000233-01

12. Sponsoring Organization Name and Address

U.S. Environmental Protection Agency - Region 10
Washington State Operations Office
Lacey, WA 90503

13. Type of Report & Period Covered

Final, 1981-1982

14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

While not intended for use by the general public, this directory provides government agency staff, health professionals, public interest groups, and product retailers and manufacturers with a uniform source of information to address public inquiries on the disposal of household quantities of pesticides, paint products, automotive products, and household cleaners. It provides a standardized response form and a set of pertinent questions to help identify the type and quantity of the material, its potential hazards, and the best disposal sites in the Seattle-King County area.

17. Document Analysis a. Descriptors

Directories; Waste Disposal; Household goods, Hazardous Materials; Pesticides; paints; solvents; lubricating oils; cleaning agents.

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

i

18. Availability Statement: Release unlimited	19. Security Class (This Report) Unclassified	21. No. of Pages 50
	20. Security Class (This Page) Unclassified	22. Price

(See ANSI-Z39.18) See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

PB84-108687

DIRECTORY

FOR HOUSEHOLD HAZARDOUS WASTE DISPOSAL IN SEATTLE-KING COUNTY

Household Hazardous Waste Disposal Project

METRO

Metro Toxicant Program
Report No. 1 E

Water Quality Division
August 1982

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA 22161

Municipality of Metropolitan Seattle

August, 1982

DIRECTORY

FOR HOUSEHOLD HAZARDOUS WASTE DISPOSAL

IN SEATTLE-KING COUNTY

Report E

of the

Household Hazardous Waste Disposal Project

Metro Toxicant Program #1

by

Susan Ridgley
Toxicant Control Planning Section
Municipality of Metropolitan Seattle

Judy Fey
U.S. Environmental Protection Agency--Region 10

(Product Disposal Recommendations developed by
HHWD Committee)

EPA Grant No. P-000233-01

Project Officer
Al Ewing
U.S. Environmental Protection Agency
Washington Operations Office
Olympia, Washington 98504

1.a

DISCLAIMER

The research and investigation described herein was funded in part by the U.S. Environmental Proteciton Agency through grant No. P-000233-01 to the Municipality of Metropolitan Seattle (Metro). The Product Disposal Recommendations (p. 16-26) have been reviewed and are endorsed by the U.S. Environmental Protection Agency. The remaining material has not been subjected to the Agency's peer and admistrative review and, therefore, does not necessarily reflect the views of the Agency, and does not carry an official endorsement.

Foreword and Acknowledgements

HOUSEHOLD HAZARDOUS WASTE -- WHAT's IT ALL ABOUT? To most people, hazardous wastes are found only in Love Canal, in large industrial dumps or in streams of toxic chemicals flowing from factory outfalls. But hazardous waste is really any substance that, when disposed of, poses a risk (e.g., ignitable, toxic) to people or to the environment.

A wide range of household products fits such a definition: pesticides, automotive oil, solvents, household cleaners, antifreeze, and others. Some of the chemicals found in these products are known or suspected mutagens, carcinogens or teratogens. Often they are toxic to human beings, fish and wildlife in small amounts. Every day, literally tons of these chemicals are washed down drains or dumped in the trash. Because they come from many small, diverse sources (households) rather than a few large, localized sources (industries), they are difficult to control and are not currently regulated.

In addition, sales of a number of household toxic substances--including certain pesticides and vinyl chloride-containing products--have been banned or severely restricted. Quantities of these banned products can still be found in people's homes. The average consumer has had no choice, until now, but to dispose of these toxic products in ways allowing their eventual release into the environment.

WHY IS METRO CONCERNED ABOUT HOUSEHOLD HAZARDOUS WASTE? As the regional agency responsible for water quality and sewage treatment--as well as transit--in King County, Metro is interested in keeping the region's waters clean. Metro has initiated a Toxicant Pretreatment Planning Study, a Toxicant Inventory Study and other related

projects as part of its commitment to assess the presence, sources, fates and effects of toxic substances in the local waters. The studies will help Metro identify problems and formulate effective control programs for point and nonpoint sources of problem toxicants.

HOUSEHOLDS CONTRIBUTE SIGNIFICANTLY to wastewater flows to the sewage treatment plants and solid waste to landfills. House, garden and garage products, such as paints, preservatives, pesticides, antifreeze and oil, can contaminate local storm-water runoff and streams. While not large when compared to industrial contributions, household hazardous wastes can be a source of problem toxicants in local waters.

BECAUSE OF THESE CONCERNS, METRO HAS BEEN STUDYING this issue and its implications as part of its Toxicant Control Program. In 1981, Metro received a water quality management grant from the U.S. Environmental Protection Agency to develop a disposal plan for small quantities of household toxicants. The Household Hazardous Waste Disposal (HHWD) Project was established as an interagency effort, coordinated by Metro and based on a working committee representing governmental agencies, private businesses, environmental and public interest groups, and concerned citizens. The goal of the project was to reduce the level of toxicants entering the environment by providing a solution to the problem of unsafe or improper disposal of household hazardous wastes.

THIS GUIDE FOR ANSWERING public inquiries--the "DIRECTORY"--is one part of the final report of the Household Hazardous Waste Disposal Project, which includes the following components (separately bound):

A. Summary,
B. Toxicants in Consumer Products,
C. Public Opinions and Actions,
D. SLEUTH--Educational Activities,
E. Directory.

THIS DIRECTORY WAS PRODUCED in response to the need for a widely available, uniform source of information on disposal methods for the large number of people handling household quantities of hazardous wastes. It constitutes a central part of the Regional Control Plan developed by the HHWD Committee, by providing realistic suggestions for the consumer.

The process of coming up with suggestions that would be both environmentally desirable and satisfactory to all the member organizations was difficult and laborious. It could not have been done without the persistence, dedication and commitment of the committee members. They worked diligently to come up with disposal recommendations and to obtain the endorsement of their respective organizations. They deserve our sincere thanks. We would also like to acknowledge Joe Simmler, Supervisor of the Toxicant Program at Metro, who provided advice and support throughout the project. Margaret Coughlan endured retypings and size changes with patience and good humor, and we thank her.

If you would like more information about the HHWD project, access to other reports or information on related activities, please contact Metro at (206) 447-5885. We trust that you will find this Directory interesting and useful. Your comments are welcome.

David V. Galvin
Project Manager, Metro

Susan Ridgley
Project Coordinator
Environmental Intern Program/NW

Table of Contents

Foreword and Acknowledgements iii

Table of Contents vi

I. **Introduction**

A. How to Use This Directory 1
B. Endorsements 4
C. Background Information 6

1. Disposal Routes 6
2. Is It Legal? 11
3. Who is Responsible? 15

II. **Disposal Recommendations**

A. Basic Information

1. General Precautions 16
2. Handling Instructions 16
3. Spills, Poisonings, Illegal Discharges 16

B. Automotive Products

1. Motor Oil 18
2. Transmission Fluid 18
3. Gasoline 18
4. Antifreeze and Brake Fluid 19
5. Batteries 19

C. Pesticides

1. Disposal of Pesticides 20
2. Small Quantity Spills 21
3. Pesticide Inquiries and Agencies Responsible 22

D. Paint Products and Wood Preservatives

1. Solvents 24
2. Paints 25
3. Wood Preservatives 25

F. Household Cleaners

1. General Comments 26
2. Alternatives 26

III. For More Information

A. Agencies and Personal Contacts 28

1. By Product Class 28
2. By Contact Agencies and Organizations 31

B. Publications 37

I. Introduction

A. How to Use this Directory

- **Who**

If you receive calls from the public concerning what they should do with toxic household waste, then this Directory is for you. You may work as a:

- government agency staff person
- member of a public interest group
- health professional
- product manufacturer or retailer.

The Directory is NOT intended for use by the general public, because in many cases there is not one simple answer. You may need to evaluate the information and give recommendations using your best judgement.

IF YOU FEEL UNEASY ABOUT ANSWERING QUESTIONS, PLEASE REFER THE CALLER TO THE METRO TOXICANT PROGRAM AT 447-5885.

DON'T GUESS!

- **What**

The Directory covers disposal methods for toxic products in four general categories:

- Pesticides
- Paint Products
- Automotive Products
- Household Cleaners.

It does not include disposal options for non-hazardous solid waste or for hazardous materials such as photographic chemicals, cosmetics, medicines, building materials, plastics and others.

- **How**

As stated previously, you should use this Directory as a guide in answering questions from the public. We suggest the following procedure in answering calls:

(a) Use the response form provided on page 4 (have a pile of photocopies on hand).
(b) Find out what the caller has and the quantity involved. Use of the form is optional but should be helpful.
(c) Look in the Directory under the appropriate product class.
(d) For some cases, there will not be an obvious answer. Use the items on the response form to gain as much information from the caller as possible. If you need to investigate further, take down the caller's name and phone number and call back later. Most inquiries are not emergency situations - take your time, think it through, and try to give an appropriate answer.

TRY TO MINIMIZE THE "PASSING THE BUCK." IF YOU DON'T KNOW THE ANSWER, FIND IT AND CALL THE CITIZEN BACK.

- **Questions to Ask**

1. All questions on the response form (p. 5).
2. How environmentally hazardous (degradable, toxic, etc.) is the product or chemical? If you don't know the answer to this question, look to the following sources of information:

   - Does the label have any clues as to contents or hazard?
   - If you only know the brand name, but not what's in it or its hazards, call

     Poison Control Center 634-5252.

- If you know what it is but don't know its hazards, either

  (a) look in reference document, Toxicants in Consumer Products*, under appropriate product class, or
  (b) call the Metro Toxicant Program at 447-5885.

3. Is the caller on a septic tank or sewer system? (see map, p. 9). This may be important for products such as antifreeze, organic solvent cleaners or exotic chemicals.

4. Where does the person live? Urban, suburban, rural? Apartment or home without yard space? Separate or combined sewer system? Reasonably close to collection centers or drop-off points?

   This may be important for products such as solvents or antifreeze which may require land application (for which the inquirer must have porous soil away from children and pets) or evaporation (need outdoor sheltered spot away from children and pets). It may also be important in ascertaining the next question:

5. How willing is the caller to take action? Is transportation available? Recommendations are worthless if the citizen will not or cannot heed them.

If you feel you do not know enough about disposal routes and effects on the environment, please read the Background Information on page 6. The other reports in the HHWD series provide detailed information on these topics (see "Foreword and Acknowledgements" on page iii).

*Available from Metro Toxicant Program, 447-5885.

B. Endorsements

The "Disposal Recommendations" (pp. 16 - 26) were drafted by the HHWD Committee and have been endorsed by the following member organizations and agencies:

- Chemical Processors, Inc.
- King County Cooperative Extension
- King County Solid Waste Division
- Municipality of Metropolitan Seattle (Metro)
- Poison Control Center (Children's Orthopedic Hospital Medical Center)
- Puget Consumers Co-op, Inc. (Product Information Committee)
- Seattle Audubon Society
- Seattle Fire Department
- Seattle/King County Health Department
- University of Washington, Department of Environmental Health
- U.S. Consumer Product Safety Commission
- U.S. Environmental Protection Agency--Region 10
- Washington Environmental Council
- Washington State Department of Ecology
- Washington State Office of Environmental Education
- Western Washington Toxics Coalition

Household Hazardous Waste Response Form

Your Name _____
Date _____

What's the Problem? (circle appropriately)

Type of material(s): Pesticide Auto Product
Paint Product Cleaner
Other: _____

Brand Name(s): _____

Active Ingredient(s): _____

Quantity(ies): _____

Description of problem: Disposal
Spill
Other

_____

_____

_____

What's the Answer? Please read "How to Use This Directory" (p. 1) for procedures and questions to ask in answering the question.

Who contacted: _____

_____

Response to Inquiry: _____

_____

_____

How did inquirer hear of the service? _____

_____

Please return to: HHWD Response
Metro/Toxicant Program (M/S 81)
821 Second Avenue
Seattle, Washington 98104

C. Background Information

1. Disposal Routes

- WHAT WILL HAPPEN if it goes into the trash?

Trash from the City of Seattle is taken to one of the city's two transfer stations, Fremont or South Park. (see the map: Garbage Dumps and Landfills, p. 7). From there it is picked up and carried to the Kent-Highlands landfill.

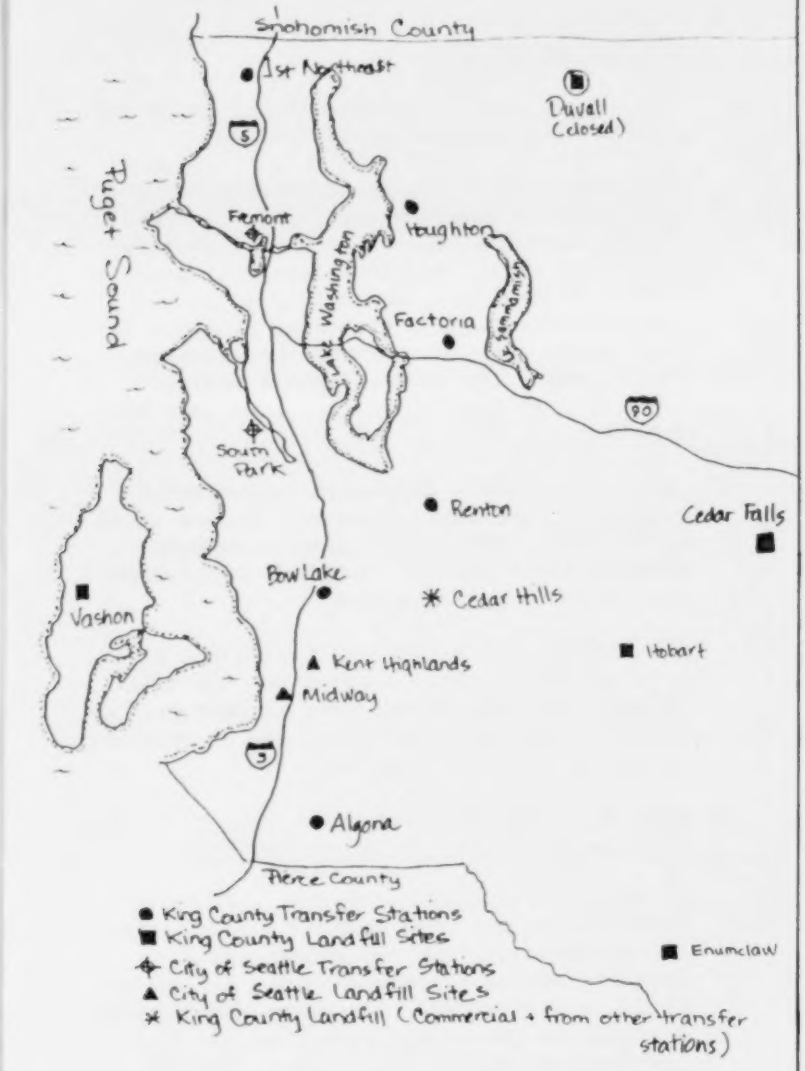
Trash from other parts of King County (outside Seattle City limits), goes to King County transfer stations and then to one of the King County landfills.

A transfer station is just what the name suggests. It is a place where garbage is brought in and deposited, and waits until it is can be taken to its final resting place--the landfill.

The City of Seattle has two transfer stations and two landfills. Both Kent-Highlands and Midway landfills accept garbage from commercial trucks hauling over 12,000 tons (gross vehicle weight) only and are not open to the public. The Midway landfill takes only waste that will not decay or decompose, such as demolition debris. Seattle citizens who want to dispose of their trash themselves must go to a transfer station.

King County has six transfer stations. (See Map, p. 7.) In addition, four landfills are open to the public at Vashon, Hobart, Cedar Falls and Enumclaw. (Duvall was closed in June of 1981.) The major landfill, Cedar Hills, is not open to the public; it only receives waste brought by commercial haulers and King County trucks carrying garbage from the transfer stations.

Disposal Routes
arbage Dumps and Landfills



1. DISPOSAL ROUTES (continued)

- WHAT WILL HAPPEN if it is put down the drain (toilet or sink)?

  The map on page 9 outlines the areas of the county which are currently sewered.

  The sewers are a system of underground pipes that collect liquid waste from each house, hotel, store, office building and factory and bring it all together into huge pipes called trunk lines, which then go to one of five regional sewage treatment plants. At the sewage treatment plant, the wastewater is cleaned. The treated liquid (called effluent) is then discharged into receiving waters.

  Much of the waste in sewage is removed by primary or secondary treatment before it is discharged. Some toxic substances pass through the treatment processes while others are broken down or removed.

  The solids that settle out during the treatment process (called sludge) are digested further and then either used in land reclamation, forest soil fertilization or compost, or disposed of in a landfill.

- WHAT WILL HAPPEN if the waste goes to an on-site (septic tank/drainfield) system?

  An on-site wastewater treatment system is usually composed of a septic tank (a large underground concrete container) and an attached bed of perforated pipes and gravel, called a drainfield. The wastewater spends 2-3 days in the septic tank. During this time heavier solids settle out. Lighter solids like grease float to the top and are trapped between structures called baffles. Bacteria in the tank will gradually break down many of the waste substances.

1. Disposal Routes
Metro Sewerage System

*The Renton Treatment Plant now discharges secondary-treated effluent into the Duwamish River. The Metro Council has authorized design work for a tunnel to the west of the plant to discharge the effluent into Puget Sound through an outfall at Seahurst.

The liquid from the tank is discharged into the drainfield, which spreads the discharge (called effluent) out into a relatively large area of soil.

The liquid percolates down through the soil around the drainfield. Some of the pollutants, including some of the hazardous wastes, will be broken down into less harmful pieces by micro-organisms in the soil. However, during wet months, bacteria and other pollutants can be carried quite a long way from the drainfield.

There have been cases where wastes containing the degreasing chemical trichloroethylene have leached from septic tank drainfields to contaminate the water table and local wells.

Every four or five years the sludge (called septage) that collects in a septic tank must be pumped out by a private contractor. This sludge is taken to the Renton treatment plant.

- WHAT WILL HAPPEN if the waste is put down a storm drain?

The storm drainage system collects stormwater runoff from streets, driveways and parking lots when it rains. These runoff waters enter pipes which run under the street surface and empty into the nearest waterway: a creek, river, lake or Puget Sound.

However, in some areas in the City of Seattle, the storm drainage pipes join up with the sanitary sewer pipes and go to Metro's sewage treatment plant at West Point. This is called a combined sewer system. The map on page 13 shows approximate locations of the combined system in Seattle. Contact the City of Seattle Engineering Department (625-2317) for exact locations.

- WHAT WILL HAPPEN if the waste is dumped in a ditch or backyard?

  In some areas, there are no storm drains. Once the soil is saturated, the water runs overland to the nearest ditch or gully and downhill toward the nearest stream. If a product such as used oil or a pesticide were disposed of in a backyard ditch, and it rained very hard the next day, that rain could send the waste overland along the ditches to a waterway, or down into the groundwater.

  The groundwater with the waste product may percolate:

  1. down to an aquifer which empties into a stream or lake in the closest watershed, or
  2. down to an aquifer which empties into a stream or lake in a neighboring watershed, or
  3. down to an aquifer which is trapped.

  (Liquid from your septic tank or the local landfill may percolate in the same way.)

2. It is Legal?

Several local agencies have regulations as well as recommendations regarding the disposal of hazardous wastes. As you consider how to answer a citizen's inquiry, ask yourself if the option being considered is legal.

Each of the disposal options: sewer, storm drain, creek, septic tank, ground, or trash, is covered briefly below. (See the Summary Report for more details on laws and regulations.)

- CAN THE PRODUCT BE DISPOSED OF DOWN THE SINK OR TOILET?

  First, it must be determined whether the caller is connected to the regional sewerage system or is on an individual septic tank. (See p. 9.)

- Metro regulations prohibit putting the following items down the drain (sink or toilet):

  --flammable or explosive materials (for example, fuel oil, waste crankcase oil, gasoline, naphtha, benzene, toluene, etc.);
  --obstructing materials (for example, ashes, sand, grass, etc.);
  --odorous materials capable of creating a public nuisance;
  --toxic vapors (for example, chlorinated hydrocarbons, cyanide, sulfur dioxide, hydrogen sulfide);
  --corrosive materials capable of causing structural damage (including waste with a pH of less than 5.5).

  These and other regulations pertain more to large industrial wastes, but also apply to household quantities.

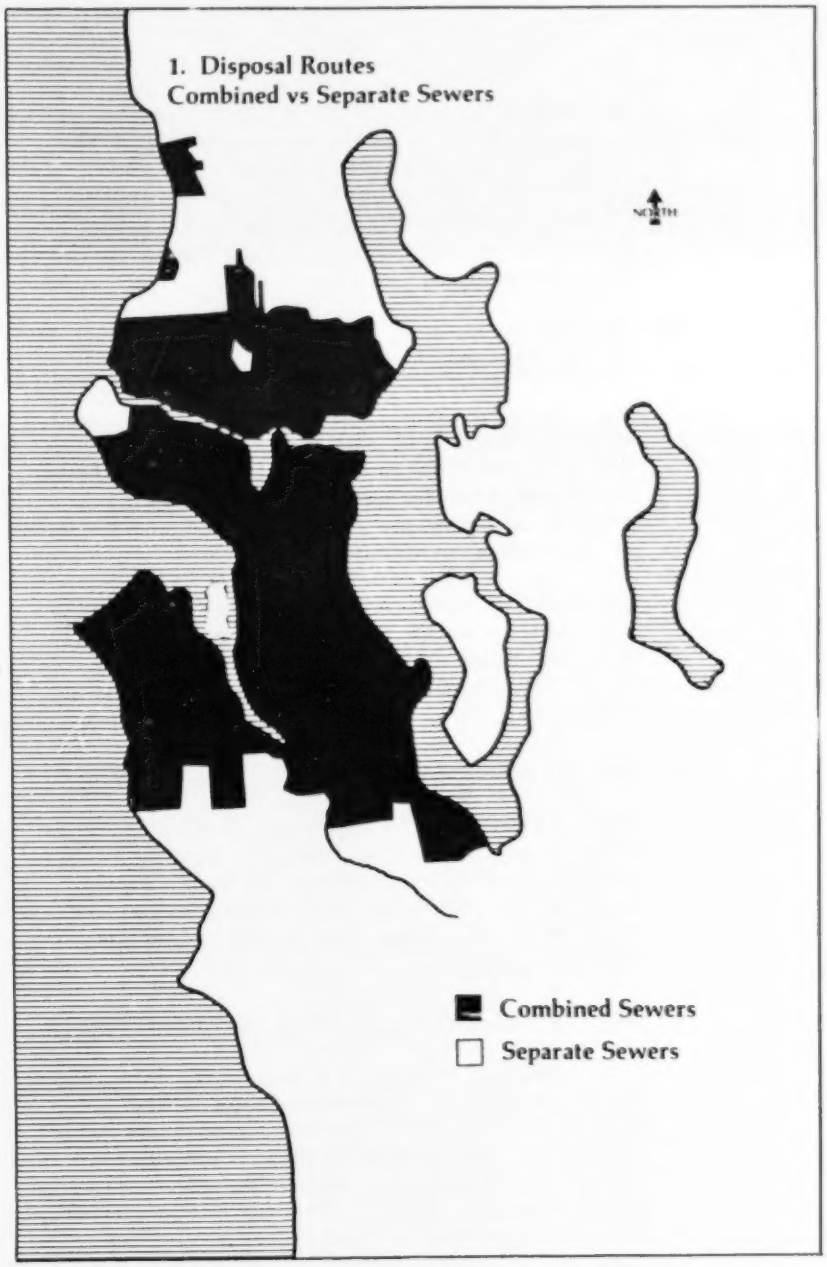
  Seattle/King County Health Department Regulations state that pesticides and toxic wastes shall not be disposed of in a sanitary sewage system or individual septic tank.

  The City of Seattle sewer ordinance prohibits wastewater containing toxic or poisonous substances in quantities that would affect receiving water or sewage treatment plants.

- CAN THE PRODUCT BE DISPOSED OF DOWN THE STORM DRAIN OR DITCH?

  If the storm drain is attached to the regional sewerage system (i.e., a combined system, see p. 13), as in some places in the City of Seattle, the Metro regulations (as stated above) would apply. If the storm drain or ditch empties into a creek, lake or Puget Sound, then the following law applies:

  Washington State Department of Ecology regulations state that it is unlawful for any person to throw, drain, or discharge any organic or inorganic material into the waters


1. Disposal Routes
Combined vs Separate Sewers
NORTH
Combined Sewers
Separate Sewers

of this state that will cause pollution of those waters. Organic materials would include oil-based paints, solvents, blood, petroleum-related products such as gasoline, crude oil, diesel oil, sludge, oil refuse. Inorganic materials would include salts and battery acid.

- CAN THE PRODUCT BE DISPOSED OF BY BURYING IT IN THE BACKYARD?

  Seattle/King County Health Department regulations state that it is legal for an individual to bury wastes from his own activities in ground that he owns or leases unless it creates a nuisance, attracts rats and insects, or contaminates groundwater.

  The Seattle and King County Fire Department regulations state it is not legal to dig a hole and bury any flammable liquid, or to throw any flammable liquid on the ground to evaporate.

- CAN THE PRODUCT BE DISPOSED OF BY BURNING IT?

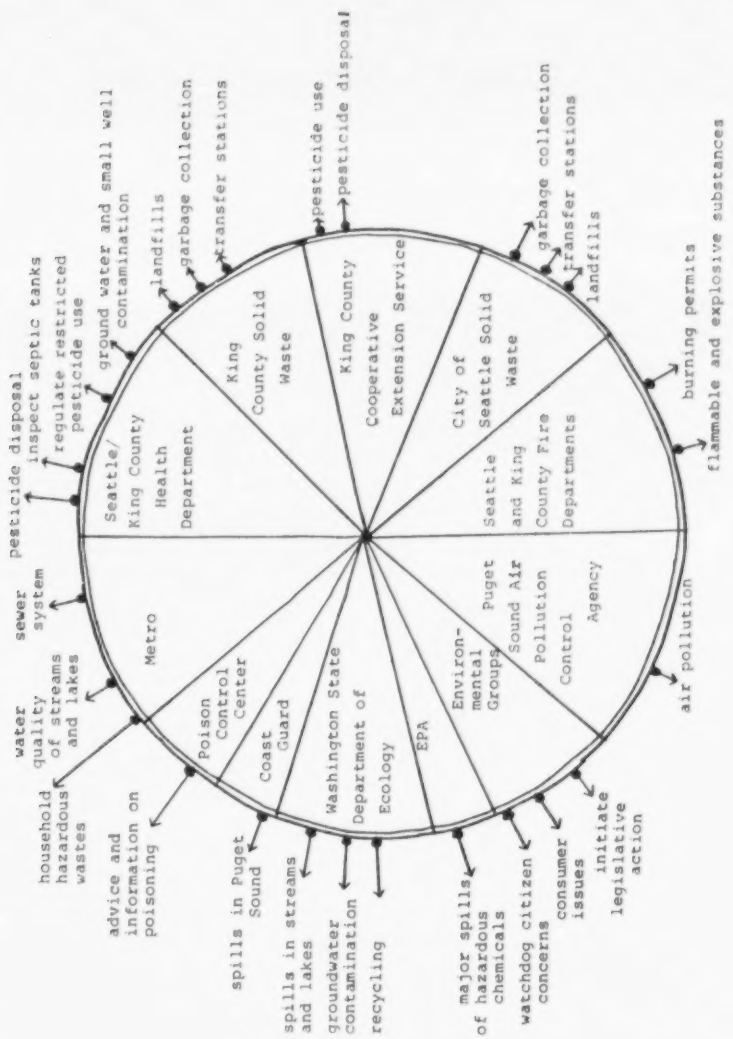
  It is illegal to do any open burning of garbage, yard clippings, branches or any other materials without a permit from the Fire Department. Open burning restrictions are imposed by the Puget Sound Air Pollution Control Agency.

- CAN THE PRODUCT BE DISPOSED OF IN THE TRASH?

  Both the City of Seattle and King County Solid Waste Divisions operate sanitary landfills. They will not take liquids, demolition debris (except at designated sites), flammable or hazardous materials. Hazardous materials are toxic, ignitable, radioactive or reactive. They also refuse to take tires since they "pop up" in the landfill because of the air pockets they create when buried.

C. Background Information (continued)

3. Who is Responsible?



II. Disposal Recommendations

A. Basic Information

1. General Precautions

The following precautions should be communicated to all inquirers.

(a) Wastes should not be mixed together.

Exceptions:

- transmission fluid can be mixed with oil.
- waste paints of different colors but same types can be mixed together (e.g., oil base with oil base and water base with water base.)

2. Handling Instructions

(a) All household hazardous waste should be handled with care during transportation. Usually the original container is the best choice to carry the waste in; if it is not available, something approximating it as closely as possible should be used.

(b) Avoid breathing the fumes from waste materials in an enclosed space, such as an automobile.

3. Spills, Poisonings, Illegal Discharges

(a) For information on:

- health effects of consumer products
- potential poisonings
- actual poisonings

Contact the Poison Control Center
634-5252 (Seattle)

(b) For information on spills on small quantities (homeowner) contact the

Washington Department of Ecology
(24 hour response) 885-1900

(c) For information on, or to report large quantity spills, contact:

(24 hour numbers)

Washington Department of Ecology
885-1900 (Redmond)

Seattle Fire Department Hazardous Materials Team
911 (Seattle Only)

EPA
442-1263 (Seattle)

Coast Guard
441-1853 or 442-1856 (Seattle)

(d) For information on, or to report spills or illegal discharges into Metro sewers:

(Business hours only)

Denise Healy 447-6747
Bruce Burrow 447-6836
Doug Hilderbrand 447-6743
Vallana Piccolo 223-7496

(24 hour response)

West Point Treatment Plant
447-6803
Renton Treatment Plant
226-3680

(e) For information on, or to report explosives, contact a Bomb Squad:

City of Seattle (Lt. Jackson)
625-2625

King County (Brent Beden)
344-5250

Washington State Patrol (Capt. Engle/ Lt. Engledon)
753-2191

B. Automotive Products

1. Motor Oil

Waste oil should be recycled at local full-service gas stations. We recommend that people call the gas station first to make sure that the station will take the oil. They can also call 1-800-RECYCLE and ask for the gas station closest to their home that accepts used oil. Gasoline should not be added to oil.

2. Transmission Fluid

Transmission fluid can be added to oil and recycled.

3. Gasoline

Uncontaminated gasoline should be used up in an automobile or other engine. Using gasoline as a solvent (e.g., to clean tools) can contaminate it. We do not advise this practice due to flammability and adverse health effects, and because of the problem associated with the disposal of the contaminated gasoline. (Kerosene, diesel fuel or regular solvents are preferable for tool cleaning and related purposes; kerosene and diesel fuel are not as flammable as gasoline and can be mixed with waste oil for recycling.)

Emphasize that gasoline must be handled with extreme care - it is one of the most hazardous (flammable, combustible, poisonous) substances found around the home.

Contaminated gasoline should be taken to Northwest Tank Service, Inc. for proper disposal. Call them at 622-1090. (This is the only company known to accept contaminated gasoline at this time).

4. Antifreeze and Brake Fluid

Antifreeze and brake fluid should be flushed down the toilet or washed down the drain with large quantities of water if connected to the central sewerage system. Do not let it run into storm drains, as they often empty directly into a stream. We do not advise washing antifreeze or brake fluid down the drain if the person is on an individual system (septic tank). For disposal instructions, call Washington Department of Ecology at 885-1900.

5. Batteries

Automobile batteries can be recycled, repaired and reused. Contact a local battery shop(listed in yellow pages under Batteries-Storage-Retail).

C. Pesticides (Includes insecticides, herbicides, fungicides, disinfectants, etc.)

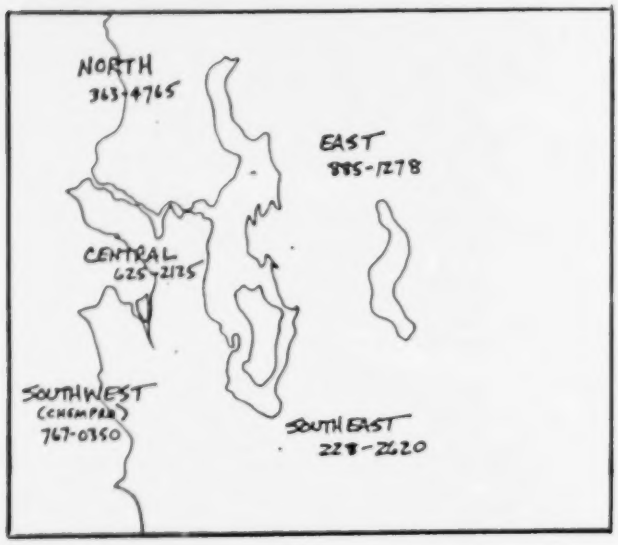
1. Disposal of Pesticides

All unwanted or waste household pesticides should be taken to a designated collection site--one of the four Seattle-King County Health Department District Offices or to Chemical Processors, Inc.

Both Chemical Processors, Inc., and the Health Department want the citizen to call them first; no unannounced drop-offs are allowed. (Chemical Processors is the only company known to accept pesticides at this time).

The phone numbers are:

SE Health Department	228-2620
E Health Department	885-1278
N Health Department	363-4765
Central Health Department	363-4765
Chemical Processors, Inc.	767-0350



If the pesticide container is torn, broken, or leaking, see the precautions listed under "General Recommendations for Spill Cleanup" below. Emphasize that pesticides should not be disposed of in the trash or down the drain.

Empty pesticide containers should be triple rinsed, and the rinse water used as a pesticide. The container should then be wrapped securely in a plastic bag or newspaper and disposed of with other household refuse.

Further questions may be directed to:

Washington State Department of Ecology
885-1900 (Redmond)

2. Small quantity Spills

For information and instructions in the event of a spill, call:

Washington State Department of Ecology
(DOE)
885-1900

General recommendations for spill cleanup:

A. Liquids

1. Keep people and pets away from the area. Ventilate area.

2. Put on rubber gloves.

3. Do not walk in spilled material unless wearing rubber boots or plastic covering over shoes.

4. Add absorbent material (Kitty litter, disposal diapers, sawdust, paper towels, old rags) - enough to soak up all excess liquid.

5. Sweep and scoop into a paper bag, then place in plastic bag (or place directly in heavy duty plastic bag.)

6. Call DOE, 885-1900, for specific ways to clean up residue and further instructions for disposal.

B. Dusts, Wettable Powders, Granules

1. Call DOE, 885-1900.

3. Pesticide Inquiries and Agencies Responsible

Questions concerning use of pesticides

King County Cooperative Extension
Master Gardener Program
344-4162

Questions/Complaints about pest control operators (PCO) (indoor pests)

Seattle-King County Health Department
625-2125

WA. State Department of Agriculture
753-5064 (Olympia)

Questions/Complaints about pesticide applicators (outdoor pest control - ornamentals, fruits, etc.)

WA. State Department of Agriculture
753-5064 (Olympia)

Questions/ Complaints about roadside weed control

King County Office of Public Works
(Jan Klippert)
344-7302

Seattle-King County Health Department
625-2125

Questions/Complaints about pesticide applicators of aquatic herbicides

Metro
447-4816

Pesticide mistakes by homeowndrs (sprayed my fruits and vegetables with _____. Can I eat the fruit?)

King County Cooperative Extension
DialExtension Tape #421
344-7680

Licenses (to use, sell or recommend certain categories of pesticides)

WA State Department of Agriculture
753-5064 (Olympia)

Pesticide education (short courses, publications, DialExtension Tapes)

King County Cooperative Extension
344-2686

D. Paint Products and Wood Preservatives

1. Solvents

Solvents can be used and recycled, if possible, in one of three ways:

(a) By filtering or settling of paint sludge. Consumer should be cautioned about fire hazards (smoking, sparks) associated with this activity.

(b) By pouring used solvent into the remaining paint and mixing well.

(c) By giving it to others who could use it. The organizations listed below will accept some solvents:

- for unopened, uncontaminated solvents:
  - Rebound Program - Tom Richards 324-0802 (Seattle). Call first.
- for uncontaminated solvents:
  - Poncho Theatre - Rob 633-4567. Call first.

If household solvents cannot be reused or used up, and are in household quantities, they can be taken to a solvent reprocessing company, Chemical Processors, Inc., 767-0350, on a case-by-case basis. Ask the citizen to call Chemical Processors, Inc. before taking the solvent in. Solvents should be handled and transported safely using the following precautions:

1. Solvents should be carried in a secure appropriate container, preferably the original, with a tight-fitting lid. Food containers should not be used.

2. Avoid breathing the fumes while handling and transporting the solvents.

2. Paints

Paints should be used up or given to others to use, if possible.

The charities and community organizations listed below will accept excess or waste paint:

- Paints of all kinds:

  Rebound Program - Tom Richards
  324-0802. Call first.

- Unopened paints only:

  St. Vincent dePaul
  623-1492.

- Paints of all kinds; minimum of one gallon:

  Poncho Theatre - Rob
  533-4567. Call first.

If paints cannot be reused or donated, the solvents in the paint may be evaporated in small quantities in a covered outdoor area (with all due precautions as to fire and health hazards) and then the remaining sludge disposed of with other household refuse.

3. Wood Preservatives

Preservatives should be treated as pesticides.

E. Household Cleaners

1. General Comments

Household cleaners include a range of cleaning and disinfecting products, such as disinfectants, bathroom cleaners, drain cleaners, furniture polish, dry cleaning fluid, bleach, oven cleaner, abrasive powder, air fresheners, floor cleaners and waxes, rug cleaners, upholstery cleaners and window cleaners, as well as laundry products such as detergents, fabric softeners and additives. This bewildering profusion of cleaners makes this class of products difficult to examine. Within each type of product, there are tens and sometimes hundreds of different formulations for specific uses and brands, and these formulations change over time and over geographical area.

Unlike many other toxic products, household cleaners pose a problem not as much through their disposal as through their use. Cleaners normally are not disposed of, in the sense that excess or leftover quantities of the substances are considered waste and dumped; instead, they would tend to enter the environment through their everyday use. We encourage the conservative use of household cleaners. If the caller has a quantity of usable cleaner that they want to dispose of, attempt to find someone who could use it. Hospitals, schools or emergency housing sites may be places that would need cleaners.

No specific recommendations have been developed for the disposal of cleaners. A few comments are in order, however:

- Use of septic tank cleaning compounds containing organic solvents (e.g., 1,1,1-trichloroethylene) is NOT encouraged. These solvents are persistent, toxic and mobile, and their use has been shown to contaminate groundwater.

- Aerosols should be used and disposed of with great caution, as excess heat or pressure (as during garbage truck compaction) can cause explosions.

- Call Metro Toxicant Control (447-5885) for information on specific disposal concerns.

2. Alternatives

Many alternatives exist for the use of safer or more benign household cleaners. Information on alternatives is available in the following references:

- "99 Ways to a Simple Lifestyle" (Center for Science in the Public Interest, 1977);

- "The Household Pollutants Guide" (Fritsch, 1978).

- King County Cooperative Extension at 344-7680.

III. For More Information . . .

A. Agencies and Personal Contacts

1. By Product Class

(a) Automotive Products:

- Northwest Tank Service, Inc.
  622-1090, Larry Peterson

- United Drain Oil Service
  762-2932, Bob Kimberly

- Washington Citizens for Recycling
  PO Box 2449, Seattle, WA. 98111
  621-8212, Chris Chapman

- Washington State Department of Ecology
  885-1900, Dennis Johnson - Litter and Recycling

(b) Pesticides:

- King County Cooperative Extension
  344-7680, Sharon Collman - Home Pesticide Use

- National Coalition Against the Misuse of Pesticides
  PO Box 50088, 930 F St., NW, Suite 617
  Washington, D.C. 20004 (202) 638-5828

  Publishes a newsletter, "Pesticides and You".

- Seattle/King County Health Department
  625-2125, Wally Swofford, Greg Bishop

- U.S. Environmental Protection Agency
  442-2887, Dr. Michael Watson - Toxicologist

- Washington State Department of Ecology
  885-1900, John Conroy - Public Pest Control Consultant

- Western Washington Toxics Coalition
  9512 University Way NE, Seattle, WA.
  633-1666, Chris Luboff

  A coalition of groups and individuals interested in hazardous waste and alternatives to pesticides.

- Washington State Department of Social & Health Services
  1-509-662-0484, Linden Baum - Pesticide Spills

(c) Paints/Solvents:

- Chemical Processors, Inc.
  767-0350, Pat Ewing, Jim Hinman

- King County Solid Waste
  344-3840, Doug Rotter

  Information on landfills, what can go in trash.

- Metro, Industrial Waste Section
  447-6560, message phone

  Limitations on substances discharged into the sewer system.

- U.S. Occupational Safety and Health Administration (OSHA)
  442-7520

  Information on hazardous chemicals. Sets standards for safe exposure levels.

- Puget Sound Air Pollution Control Agency
  344-7330, Dispatcher

  Questions on air quality.

- Seattle Fire Marshal
  625-4086, Capt. Howard McEwen, Lt. Pat Pavey

  City of Seattle regulations for storage, handling and use of hazardous chemicals.

- Washington Department of Ecology
  885-1900, John Conroy

(d) Household Cleaners:

- Poison Control Center
  634-5252, Steve Bobbink

  Information on consumer product contents, acute poisoning effects.

- U.S. Consumer Product Safety Commission
  442-5276, Jerry Bjork

- U.W. Environmental Health
  232-7045, Sue Mason

  Has done research on household cleaners.

- Washington Public Interest Research Group
  FK-10 HUB, University of Washington
  543-6098 or 542-1275, Donald Norman

2. By Contact Agencies and Organizations

(a) Federal Government Agencies:

- U.S. Consumer Product Safety Commission
  Room 962, Federal Bldg., Seattle, WA. 98104
  442-5276, HHWD Contact: Jerry Bjork

  Regulates the safety of many consumer products--labelling, banning, etc.

- U.S. Environmental Protection Agency
  1200 Sixth Avenue, Seattle, WA 98101
  442-2804, HHWD Contact: Judy Fey

  Sets standards and enforces federal environmental regulations.

- U.S. Food and Drug Administration
  909 1st Avenue, Seattle, WA
  442-5300

  Concerned with chemicals in foods, drugs, cosmetics.

- U.S. Occupational Safety and Health Administration
  121 107th NE, Bellevue, WA
  442-7520

  Has knowledge about hazardous chemicals. Sets standards for safe exposure levels in workplace.

(b) Government Agencies - State, Regional, Local

- King County Cooperative Extension
  312 Smith Tower, Seattle, WA 98104
  344-7680, HHWD Contact: Sharon Collman

  Knowledge of pesticides, alternative agricultural and household methods and products.

- King County Solid Waste
  601 F.X. McRory Bldg., 419 Occidental Avenue South, Seattle, WA
  344-3840, HHWD Contact: Doug Rotter

  Information on landfills, what can go in trash.

- Metro (Municipality of Metropolitan Seattle
  821 Second Avenue, Seattle, WA 98104
  447-4818 or 447-5885, HHWD Contact: Susan Ridgley, Dave Galvin

  Regional agency responsible for transit and water pollution control. Coordinates HHWD project. Wide variety of information available, especially what can go into sewer.

- Poison Control Center
  4800 Sand Point Way NE, Seattle, WA. 98105
  634-5252, HHWD Contact: Steve Bobbink

  Information on consumer product contents, acute poisoning effects.

- Puget Sound Air Pollution Control Agency
  PO Box 9863
  Seattle, WA 98109
  344-7355, HHWD Contact: Jim Nolan

  Complaints and questions concerning air quality.

- Seattle/King County Health Department
  400 Yesler Bldg., Seattle, WA 98104
  625-2125, HHWD Contact: Wally Swofford, Greg Bishop

  Enforces health regulations, including those concerned with septic tanks and pesticide use. Runs pesticide collection system for household quantities.

- Tacoma/Pierce County Health Department
  3629 South "D" Street, Tacoma, WA 98408
  593-4760, HHWD Contact: Kim Lowry

  Enforces health regulations for the Pierce County area. Published booklet, "Hazardous Waste in My Home?"

- Washington State Department of Ecology
  4350 150th Ave. NE, Redmond, WA 98502
  885-1900, HHWD Contact: John Conroy, Julie Sellick

  Enforces state environmental regulations.

(c) Citizen Groups and Environmental Organizations:

- Center for Science in the Public Interest
  1755 "S" Street NW
  Washington, D.C. 20009
  (202) 332-9110

  A non-profit research organization that investigates public interest issues such as energy, environmental protection, consumer safety and health nutrition.

- Environmental Action Foundation
  The Dupont Circle Bldg., Suite 724
  Washington, D.C.
  (202) 659-9682, HHWD Contact: Tom Conry

  A non-profit group, acts as national clearninghouse for hazardous waste information; publishes newsletter, "Exposure".

- League of Women Voters
  1204 18th, Seattle, WA
  329-4848, HHWD Contact: Susan Schulz

  Information on hazardous waste, other issues.

- Seattle Audubon Society
  619 Joshua Green Bldg., Seattle, WA
  622-6695, HHWD Contact: Pam Crocker-Davis

  General information on local hazardous waste issues.

- University of Washington
  Department of Environmental Health

  545-3785, Dave Eaton,Toxicologist
  Questions on health effects of
  toxic chemicals.

  543-4252, Dave Kalman,Organic Chemist
  Questions on chemical reactions and
  structure.

- Washington Environmental Council
  80 South Jackson St. Suite 308
  Seattle, WA 98104
  623-1483, HHWD Contact: Pam Crocker-Davis

  Information on state hazardous waste
  issues and regulations.

- Washington Citizens for Recycling
  PO Box 2449, Seattle, WA 98111
  621-8212, HHWD Contact: Chris Chapman

  Information on recycling, including
  waste oil.

- Western Washington Toxics Coalition
  9512 University Way NE, Seattle, WA.
  633-1666, Chris Luboff

  A coalition of groups and individuals
  interested in hazardous waste and
  alternatives to pesticides.

(d) Manufacturers/Industry:

Many manufacturers publish "Material Safety Data Sheets" and other materials which are available to the public. Call or write the company. Your local retail supplier or library may have their address and phone number.

- Chemical Specialties Manufacturers Association
  Suite 1120, 1001 Connecticut Ave NW
  Washington, D.C. 20036
  (202) 872-8110, HHWD Contact: Larry Levin

  Represents manufacturers and distributors of numerous household products, including detergents and cleaners, home lawn and garden pesticides and automotive chemicals.

- Chemical Processors, Inc.
  5501 Airport Way South, Seattle, WA
  767-0350, HHWD Contact: Pat Ewing

  Treats and handles industrial hazardous waste, and accepts some solvents, pesticides, and other chemicals from households. Information on highly toxic and unusual chemicals.

- Chem-Security Systems, Inc.
  PO Box 1866, Bellevue, WA 98009
  827-0711, HHWD Contact: Jean VanWallendae

  Handles hazardous waste in the Northwest. Runs the hazardous waste landfill in Arlington, Oregon.

B. Publications

Artist Beware, by Michael McCann, Watson-Guptill Publications, New York, 1979 (378 pages). An excellent handbook for artists, craftsmen, and home hobbyists. Explains the health risks associated with numerous chemical products, safety procedures, first aid and recognition of poisoning. Individual chapters on painting, printmaking, ceramics, glassblowing, enameling, sculpture, metalworking, photography, crafts and children's art. Bibliography.

Cancer and Chemicals, by Thomas H. Corbett, M.D., Nelson-Hall, Chicago, 1977. Describes carcinogenic chemicals use in the home, at work and in medical practice. Includes information on decreasing risk.

Clinical Toxicology of Commercial Products, by Robert E. Gosselin, et al., 4th ed., The Williams and Wilkins Co., Baltimore, Md., 1976. 3000 chemical ingredients widely used in commercial products, gives toxicity information on each. Also has a trade name index for 17,000 products which identifies manufacturers, lists of ingredients for each product, and specifies toxic components.

CRC Handbook of Laboratory Safety, edited by Norman V. Steere, The Chemical Rubber Co., Cleveland, 1971 (854 p). Gives procedures for disposal and hazards associated with several thousand chemicals. Laboratory safety procedures.

Dangerous Properties of Industrial Materials, by N.I. Sax, et al., Van Nostrand Reinhold Publishing Corp., N.Y., 1979. Gives physical properties, toxicity, explosion, fire, and radiation hazard ratings for 9000 chemicals. Also gives data on personal hygiene, ventilation, disaster control, shipping regulations and storage/handling procedures for each chemical.

Fire Protection Guide on Hazardous Materials , by National Fire Prevention Assoc., 470 Atlant Avenue, Boston, MA 02210, 1978. Information on fire, explosion, toxicity, and reactivity ratings of thousands of chemicals. Has list by brand name which identifies manufacturers, flash point, and principal uses. Information on safe storage methods.

Guidelines for the Disposal of Small Quantities o Unused Pesticides, by E.W. Lawless, T.L. Ferguson, and F.F. Meiners, (Midwest Research Institute), Publication No. EPA 670/2-75-057. U.S. Government Printing Office, Washington, D June, 1975. (Also available from National Technical Information Service, Springfield, VA, as PB-244 557.) Describes 14 detailed treatment methods for 550 pesticides, treatment of small spills, disposal of empty containers. Has reference charts of pesticide properties and a cross index of chemical names, common names and trade names. Aimed more at regulator authorities than the layman.

Handbook for Pesticide Disposal by Common Chemical Methods, by C.C. Shih and D.F. DalPorto (TRW Systems and Energy), U.S. Environmental Protection Agency, Washington, D.C., N.D. Describes step-by-step chemical degradation/ detoxification and disposal procedures for 20 major pesticides. Also contains an extensive review of the literature on such procedures.

The Household Pollutants Guide, edited by Albert J. Fritsch, (Center for Science in the Public Interest), Anchor Press/Doubleday, Garden City, N.Y. , 1978. Provides detailed information on all kinds of household products and appendices on hazardous substances determination, sources of information, typical potential household hazards and acronyms.

Human Ecology and Susceptibility to the Chemical Environment, by Theron G. Randolph, M.D., Charles C. Thomas, Springfield, Illinois, N.D. Describes numerous household products and their role in producing allergic reactions. Includes questionnaire to help the reader identify possible allergies.

Laboratory Waste Disposal Manual, Manufacturing Chemists Association, Washington, D.C., May 1979. (176 pages). Safe procedures for on-site waste dsiposal from small laboratories. Covers 1121 individual chemicals and their properties.

The Merck Index: An Encyclopedia of Chemicals and Drugs, by P.B. Stecher, et al., Merck and Co., Inc., Rahway, N.J., 1968.
Describes toxic effects and common uses of 10,000 chemicals. Has poison control center list, first aid information, and a cross-index of chemical names anu formulas.

Registry of Toxic Effects of Chemical Substances, by R.J. Lewis and R.L. Tatken, U.S. Department of Health, Education and Welfare, Washington, D.C., 1978.
Identifies toxicity to humans, animals and aquatic life of most known organic and inorganic chemicals. Describes carcinogenic, teratogenic or mutagenic properties.

Safe Storage and Disposal of Pesticides, U.S. Environmental Protection Agency, May 1978, OPA 77/8 (pamphlet), available through EPA Regional Office, JFK Building, Boston, MA 02203.

The Safe Use, Storage and Disposal of Household Hazardous Chemicals, Massachusetts (in preparation), Metropolitan Area Planning Council, 110 Tremont St., Boston, MA. 02108
Booklet outlining the basic facts concerning Household Hazardous Waste Disposal.

Why Your House May Endanger Your Health, by Alfred V. Zamm, with Robert Gannon, Simon and Schuster, New York, 1980.
Describes numerous household products and their role in producing aliergic reactions. Describes safer alternative products, including architectural design considerations. Has questionnaire to identify health hazards and a manufacturer's list.

Metro Documents:

Summary Report of Household Hazardous Waste Disposal Project.

Toxicants in Consumer Products. Technical analysis of the human health and environmental effects of the toxic chemicals found in consumer products.

Public Opinions and Actions. Provides detailed analysis and description of the public opinion surveys and the pilot collection project that Metro conducted through the HHWD project.

SLEUTH: Educational Activities on the Disposal of Household Hazardous Waste. Guide for use of teachers of junior high or high school classes, with creative activities on Household Hazardous Waste Disposal. Also adaptable for elementary grades or community groups.